

REMARKS

Reconsideration of this application in view of following remarks is respectfully requested. Claims 6, 17, 28, 31, and 32 are pending. As to the merits, each of the claims was admitted to be novel over the prior art, but the office action raised several obviousness rejections as follows:

- Claim 32 was rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2002/0071940 to Arnold et al. ("Arnold") in view of U.S. Patent No. 5,817,243 to Shaffer et al. ("Shaffer"). [7/25/08 office action at pp. 2-6].
- Claim 32 was rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,521,326 to Fischer et al. ("Fischer") in view of Shaffer. [7/25/08 office action at pp. 6-8].
- Claims 6, 17, 28, and 31 were rejected pursuant to 35 U.S.C. § 103(a) as allegedly being unpatentable over Fischer in view of Shaffer and either U.S. Patent No. 6,017,138 to Reiss et al. ("Reiss") or 4,954,422 to Lamprecht ("Lamprecht"). [7/25/08 office action at pp. 8-9].

Applicants note with appreciation the withdrawal of the prior rejections over Pyburn, Tsai, Ouderkirk, Weber, Pope and Hideki. The remaining rejections are addressed below, and Applicants urge that they too be withdrawn.

A. Claim 32 is Patentably Distinct from the Arnold in view of Shaffer and from Fischer in view of Shaffer

Both of the rejections of independent claim 32 are traversed. The cited references (Arnold, Shaffer and Fischer) taken alone or in combination fail to teach disclose or suggest all of the features of Applicants' claim 32. For example, the cited

references do not disclose the step of producing unique right and left headlamps from two identical injection molded components by selective laser ablation.

Applicants' claim 32 recites:

"32. A method of manufacturing right and left-side headlamp reflectors from a single mold, the method comprising:

injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face;

metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source; and

producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces."

The two "primary" references are Arnold and Fischer. These are discussed immediately below. Then, the shared deficiencies of the secondary reference, Shaffer, are discussed.

Arnold

Most generally, Arnold is directed to multi-layered structures having a substrate and a metallized layer deposited on at least one side of the substrate. [Arnold ¶¶0020, 0021]. These multi-layered structures can be "placed into an injection molding chamber and an injection molding resin can be deposited on the metallized substrate." [Arnold ¶¶0021, 0060].

Arnold says that metallized multi-layer structures may be used to create reflective surfaces on lamp housings, vehicle reflectors or head lights. [Arnold ¶0053]. In that context, Arnold discloses that “the resin 16 and metallized film 15 can be formed to create a lamp housing 30 so as to reflect and focus light that is emitted from a light source 32.” [Arnold ¶0053]. Such a lamp housing having a semi-circular shape is shown in Arnold’s Figure 12:

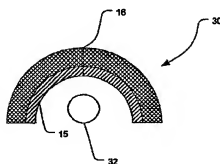


FIGURE 12

With regard to Applicants’ method claim 32, Arnold’s method of manufacture involves several steps and is shown in Figures 13-18. First, a film is formed into a desired shape as depicted in Figures 13-14 to create a molding insert. This film forming step is *not* described as injection molding. The film may be decorated by various printing methods either before or after this forming step. [Arnold ¶¶0055, 0056; Figure 15]. Second, the molding insert can optionally be metallized with a metal layer. [Arnold ¶0057; Figure 16]. Third, the metallized molding insert is subjected to insert injection molding:

“[T]he pre-shaped and metallized insert 42 is manually or robotically placed in an injection molding cavity 44.... The molten plastic resin 43 is delivered into the injection mold cavity 44 so as to contact the metallized insert 42.” [Arnold ¶0060; Figure 17-18].

From this discussion, it is clear that *none* of the steps of Applicants’ method claim 32 is disclosed. Arnold generally discloses that injection molding can be used. Arnold does not teach, disclose or suggest the more specific step recited in Applicants’ method claim 32, “injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face.” Although more general aspects of Arnold’s teachings *might* be useful in practicing Applicants’ method claim 32, Arnold does not disclose, expressly or inherently, the specific claimed step.

Likewise, Arnold also fails to teach, disclose or suggest “metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source” as recited in Applicants’ method claim 32. Applicants’ two identical components are the resulting products of the earlier injection molding step. Therefore, it is important to appreciate that, by contrast, Arnold’s metallization step occurs *prior to* the injection molding. [Arnold ¶0057; Figure 16].

Further still, Arnold fails to teach, disclose or suggest “producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation” as recited in Applicants’ method claim 32.” The office action admits that Arnold fails to disclose producing a right-side headlamp

reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces. [7/25/08 office action at p. 3 (Arnold doesn't relate to "employing headlamp reflectors with symmetrical elliptical the [sic] shapes, so that a single mold can be used for both right & left side reflectors"). It is further conceded that Arnold fails to disclose modifying headlight reflectors via patterning of the reflective metal as well as doing so via laser ablation. [7/25/08 office action at p. 3]

Nonetheless, the office action takes the position that the third step of Applicants' method claim 32 is not of patentable significance:

"Respect to the injection molded components for right & left side headlight reflectors being identical, this is considered a design consideration dependent on whether or not one desires the pair of headlights to be identical shapes or mirror images of each other, either of which option would have been expected to be included in standard design choices, as would an elliptical shape for headlight reflector, hence the claim of identically molded components is not considered to be of patentable significance due to obvious known style variations employed by the automotive industry." [7/25/08 office action at p. 4].

Applicants strongly disagree with the office action on this point, which they assert is clear error. Each step of a claimed method must be found either expressly or inherently in the prior art to properly make out a *prima facie* case of obviousness. See MPEP § 2143.03. The office action cannot decide which claimed steps are "significant" and which are not. That sort of discretion is beyond the purview of the PTO Examining corps.

The rejection uses the phrase "design consideration" which is not found in the MPEP. Instead the MPEP discusses a "design choice" rationale at Section 2144.04, in connection with obviousness rejections relying on the mere *re-arrangement* of parts. Suffice it to say, the stated rejection is not merely trying to re-arrange the manufacturing steps of Arnold, but rather is trying to supply entire steps that are *missing* from the cited references. Resort to a "design choice" rationale is improper in this context. Moreover, even if "design choice" were proper, the MPEP reminds us that "[t]he prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." (citing *Ex parte Chicago Rawhide Mfg. Co.*, 223 U.S.P.Q. 351, 353 (Bd. Pat. App. & Inter. 1984)). The required motivation or reason is absent from the rejection.

The proper factual basis also is missing. Despite the assertion in the above-quoted paragraph of the office action that various things allegedly were known in the prior art, the office action fails to point to any reference that actually has this disclosure.¹ Conjecture is not an appropriate basis for a rejection. It is worth repeating, it is undisputed that Arnold fails to disclose right and left headlight reflectors, modifying those headlight reflectors via patterning of the reflective metal or doing so via laser ablation.

¹ If the PTO maintains this rejection, which it should not, Applicants respectfully request that the Examiner identify where in the prior art it is shown that (1) right & left side headlight reflectors are identical, and (2) either identical shaped headlights or mirror imaged headlights were "standard design choices."

There is absolutely nothing in Arnold that would have suggested to take his semi-circular head lights in Figure 12, and to instead substitute elliptical head lights, and also to take the same (i.e., identical) blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation. This is disclosed in Applicants' specification, but it is utterly and completely absent from Arnold's disclosure. As discussed below, Shaffer does not alleviate these shortcomings.

Fischer

Fischer, the other primary reference, is directed to glass-fiber reinforced composites composed of at least two moldings immovably bonded together laser welding. More specifically, Fischer discloses that at least 50% by weight of the first molding is composed of various specified weights of A) polyester, B) fibrous filler pretreated with an aminosilane compound and with an epoxy polymer, C) elastomeric polymer, and D) other additives. [Fischer, Col. 1, lines 44-63]. These molding compositions "may be processed by thermoplastic processes known per se, to give moldings," such as "injection molding." [Fischer, Col. 11, lines 29-36]. Fischer's composites are said to be useful for producing various "headlamp components" such as "headlamp housings, headlamp frames, headlamp retainers and headlamp guides, preference being given to headlamp frames." [Fischer, Col. 16, lines 43-47].

What is missing from Fischer and what is not identified in the office action are any specific teachings, disclosures or suggestions of how this manufacture is to be

accomplished according to Fischer. This is because Fischer is largely silent in this regard, which is fatal to the rejection of Applicants' method claim 32.

To be concrete, Fischer does not teach, disclose or suggest "injection molding a plastic material in a single mold to provide two identical components, each component having an elliptical inner face" as recited in Applicants' method claim 32. Fischer also fails to teach, disclose or suggest "metallizing the inner faces of the two identical components to provide two metallized components that reflect light rays emitted by a light source" as recited in Applicants' method claim 32, although Fischer does mention that its novel composites can be used with a reflecting, metallized surface. [Fischer, Col. 16, lines 35-37]. There are no details regarding how this metallization is achieved.

Fischer has exactly one sentence in its disclosure relating to the use of lasers with the disclosed composites. That sentence suggests the possibility that an undefined "laser inscription" step may also be used in conjunction with the disclosed composites. [Fischer, Col. 17, lines 5-8]. Due to the limited nature of that disclosure, it is unclear whether this "inscription" is an ablation of a metallized surface. What is clear, however, is that Fischer fails to teach, disclose or suggest "producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation" as recited in Applicants' method claim 32." There is absolutely nothing in Fischer that would have suggested to take the same (i.e., identical) blank

components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation.

The office action seems to admit that Fischer's laser inscription step does not correspond to Applicants' laser ablation step recited in method claim 32, but attempts to rely on Shaffer for that disclosure. As addressed below, Shaffer does not alleviate these shortcomings.

Shaffer

Shaffer, the secondary reference that it to be combined with Arnold or Fischer, is directed to a method of applying decorative contrast designs to automotive and motorcycle parts (e.g., chrome plated motorcycle gas cap, plastic lens for motorcycle lamp, chrome coated glass mirror) using lasers. [Shaffer, Col. 1, lines 36-45 and Col. 2, lines 47-57]. The laser is used to ablate portions of a previously applied mirror coating. [Shaffer, Col. 5, lines 20-24; see also Col. 2, lines 27-29 and Col. 7, line 62 – Col. 8, line 3].

The office action's citation to Shaffer is limited to the supposed disclosure of producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces. Shaffer is not alleged to alleviate the deficiencies with regard to the first two steps of Applicants' claim 32. Because Arnold and Fischer have deficiencies with regard to the first two steps, the rejections are improper. Nonetheless, Applicants explain below their disagreement with

the office action's understanding of Shaffer. This is a further basis for withdrawal of the rejections.

More specifically, Shaffer shares the same deficiencies as Arnold and Fischer, despite its general disclosure of the use of laser ablation with certain car parts. There is absolutely nothing in Shaffer that would have suggested to take the same (i.e., identical) injection molded blank components and to modify them to make individualized right and left elliptical head lights, and to do so with laser ablation. There is nothing in Shaffer (or in Arnold or Fischer) that would suggest that the laser ablation of Shaffer should be used to improve the methods of the primary references to arrive at the subject matter of Applicants' method claim 32. Shaffer certainly does not use laser ablation to improve a manufacturing process in the same way that Applicants' disclose.

In sum, either Arnold or Fischer in view of Shaffer fails to teach, disclose or suggest the subject matter of Applicants' claim 32, such as "producing a right-side headlamp reflector and a left-side headlamp reflector from the metallized components by selective laser ablation of the metallized inner faces to provide non-metallized zones that do not reflect light on the inner faces." The rejections should be withdrawn.

B. Claims 6, 17, 28 and 31 are Patentably Distinct from the Fischer in view of Shaffer, Reiss and Lamprecht

The rejection of claims 6, 17, 28 and 31 also is traversed. The cited references (Fischer, Shaffer, Reiss and Lamprecht) taken alone or in combination fail to teach disclose or suggest all of the features of Applicants' independent claim 17, e.g., metallizing said component after laser radiation exposure to form said mask, wherein the

textured surface of the component after metallization provides a matt zone that does not reflect light.

Applicants' method claim 17 recites:

"17. A method of manufacturing a mask for motor vehicle headlamps adapted to emit a predetermined light beam, the method comprising:

providing a component of a motor vehicle headlamp, the component defining at least one orifice for holding a motor vehicle headlamp lens;

exposing at least one surface of said component to laser radiation to texture said component; and

metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light."

As discussed above, neither Fischer nor Shaffer discloses metallizing *after*

laser radiation exposure to provide a mask for motor vehicle headlamps. The office action apparently agrees with this understanding. [7/25/08 office action at p. 8]. Reiss and Lamprecht do not alleviate this deficiency.

Reiss is directed to a motor vehicle headlamp with a cut-off line reflector and two masks that define two shadow zones on the reflector. Reiss discloses that "opaque paint" should be applied to *the discharge lamp (2), not to a motor vehicle reflector itself*. [Reiss, Col. 4, lines 49-54]. Reiss contains no discussion of lasers or of metallizing motor vehicle reflectors. None is cited in the office action. Thus, Reiss fails to teach, disclose or suggest "metallizing said component after laser radiation exposure to

form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light,” as recited in Applicants’ claim 17.

Lamprecht is directed to a photosensitive recording material having a base, a particulate layer on top of the base, and a metallic layer on top of the particulate layer. Lamprecht is *not* addressing the manufacture of motor vehicle headlamp reflectors. Instead, this disclosure “relates to a photosensitive recording material for recording information ... under the action of light having a high energy density.” [Lamprecht, Col. 1, lines 8-12]. In the photosensitive record material arts, Lamprecht states that use of “coherent metal layers” is problematic because of the relatively high reflectance. [Lamprecht, Col. 1, lines 34-46].

Applicants respectfully submit that the citation of Lamprecht in a Section 103 rejection is improper because it constitutes non-analogous art. *See* MPEP § 2141.01(a). Lamprecht is not within the present inventors’ field of endeavor, and is not reasonably pertinent to the particular problem with which the present inventors were involved. *See In re Clay*, 966 F.2d 656, 659, 23 U.S.P.Q.2d 1058, 1061 (Fed. Cir. 1992). This point was previously made, but was not addressed by the current office action. If the rejection is maintained, an explanation is respectfully requested so that the record is clear.

In any case, Lamprecht is clearly distinguished from Applicants’ claim 17. The office action points to the alleged disclosure by Lamprecht that the plastic substrate may be texturized by laser prior to metallization. [7/25/08 office action at p. 8 (citing

Col. 1, lines 47-52)] That passage relates to a discussion of a prior art European Patent No. 01 07 379, which Lamprecht characterized as disclosing texturing a plastic substrate by laser interferometry and having a metal layer applied by vapor deposition to reduce the reflectance of a coherent semiconductor or metal layer.

Thus, Lamprecht fails to teach, disclose or suggest “metallizing said component after laser radiation exposure to form said mask, wherein the textured surface of the component after metallization provides a matt zone that does not reflect light,” as recited in Applicants’ claim 17.

None of the cited references discloses the metal layer application step as recited in Applicants’ independent claim 17. Respectfully, Applicants’ independent claim 17 is asserted to be patentably distinct from Fischer in view of Shaffer, and further in view of either Reiss and Lamprecht for at least these reasons. For at least similar reasons, independent claim 28 and dependent claims 6 and 31 also are patentably distinct.

Applicants have chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Finally, Applicants have not specifically addressed the rejections of the dependent claims. Applicants respectfully submit that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicants,

however, reserve the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1948-4826.

Dated: November 20, 2008

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